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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Somnath Banik, et al.

Serial No.: 09/514,489

Filed: February 29, 2000

For: SYSTEM AND METHOD FOR COMMUNICATING DATA  
OVER A RADIO FREQUENCY VOICE CHANNEL

Grp./A.U.: 2684

Examiner: Tu X. Nguyen

Commissioner for Patents  
P.O. Box 1450  
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ATTENTION: Board of Patent Appeals and Interferences

Sirs:

**APPEAL BRIEF UNDER 37 C.F.R. §41.37**

This is an appeal from a Final Rejection mailed November 3, 2004, of Claims 1-2, 4-9 and 11-22. The Appellants submit this Brief with the statutory fee of \$500.00 as set forth in 37 C.F.R. §41.20(b)(2), and hereby authorize the Commissioner to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 08-2395.

This Brief contains these items under the following headings, and in the order set forth

below in accordance with 37 C.F.R. §41.37(c)(1):

- I. REAL PARTY IN INTEREST
- II. RELATED APPEALS AND INTERFERENCES
- III. STATUS OF CLAIMS
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- V. SUMMARY OF CLAIMED SUBJECT MATTER
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#### I. REAL PARTY IN INTEREST

The real party in interest in this appeal is the Assignee, Agere Systems Inc.

#### II. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

#### III. STATUS OF THE CLAIMS

Claims 1-2, 4-9 and 11-22 are pending in this application and have been rejected under §102(e) or §103(a). Each of the pending claims are being appealed.

#### IV. STATUS OF THE AMENDMENTS

The present Application was filed on February 29, 2000, with Claims 1-20. The Appellants filed a first Request for Reconsideration on August 15, 2002, in response to a first

Examiner's Action mailed May 24, 2002. The Examiner considered the Appellants' arguments moot in view of new grounds for rejections as asserted in the second Examiner's Action mailed on October 23, 2002. The Appellants then filed a first Amendment on January 16, 2003, that amended Claims 1 and 8 and canceled Claims 3 and 10. The Examiner again considered the Appellants' arguments moot in view of new grounds for rejections as asserted in the third Examiner's Action mailed on March 17, 2003. The Appellants filed a second Request for Reconsideration on June 5, 2003, that argued against the rejections in the third Examiner's Action. The Examiner then filed a fourth Examiner's Action on July 25, 2003, that again considered the Appellants' arguments moot in view of new grounds for rejection.

On October 23, 2003, the Appellants filed a second Amendment that again amended Claims 1 and 8. The Examiner considered the Appellants' arguments moot in view of new grounds for rejections as asserted in the fifth Examiner's Action mailed on January 5, 2004. In response, the Appellants filed a third Amendment on April 2, 2004, that added Claims 21-22. A sixth Examiner's Action was then filed on May 7, 2004, citing new grounds for rejections of all the pending claims. The Appellants responded with a third Request for Reconsideration on August 4, 2004, that argued for the allowance of the pending claims. On November 3, 2004, the Examiner mailed a Final Rejection rejecting all of the pending Claims 1-2, 4-9 and 11-22. The Appellants filed a fourth Request for Reconsideration on December 29, 2004, that the Examiner responded to January 26, 2005, with an Advisory Action maintaining the final rejections. The Appellants then filed a Notice of Appeal on February 3, 2005, for Claims 1-2, 4-9 and 11-22 as filed with the second Amendment of April 2, 2004.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed, in general, to a communication system and, more specifically, to a system and method of sending data over a voice channel. (See page 1, lines 4-6.) The present invention introduces the broad concept of sending packets of data during pauses or periods of silence that occur during voice interchanges. The present invention provides substantial utility by making efficient use of the communication channel and eliminates possible distortions in the voice transmission that may occur if data and voice are superimposed. (See page 4, lines 12-18.)

Independent Claim 1 is directed to a system for communicating data over a voice channel between a transmitter of a base station and a receiver of a handset of a cordless telephone including: (1) a silence detector, coupled to the transmitter, that identifies a pause in voice traffic that is to be transmitted over the voice channel and generates an interjection signal during the pause and (2) a data injector, coupled to the silence detector, that receives the interjection signal and responds by causing the transmitter to transmit data to the receiver over the voice channel. (See page 4, lines 4-11; page 5, lines 6-8; and page 15, lines 1-10 and 15-17.)

In one embodiment, a data transmitter system 210 and a data receiver system 220 are associated with a base station 110 and a handset 120 of a cordless telephone 100, respectively. (See page 10, lines 9-14 and Figures 1-2.) The data transmitter system 210 includes a silence detector 214 and a data injector 216 in addition to a base station antenna 211, a transmitter/receiver 212, a telephone line interface 213 and a data register 215. Voice and data information are accepted from the phone lines by the interface 213. Voice information is presented to the transmitter/receiver 212 for transmission to the handset 120 in the regular manner via the base station antenna 211. Data information is routed to the data register 215, for

holding, from the interface 213 until it is appropriate for it to be transmitted to the data receiver system 220. The silence detector 214, coupled to the transmitter/receiver 212, identifies a pause in voice traffic and generates an interjection signal during the pause. This interjection signal enables the data injector 216 during this pause, causing the transmitter/receiver 212 to transmit data to the data receiver system 220 over the voice channel. (See page 10, line 18 to page 11, line 9.)

Independent Claim 8 is directed to a method of communicating data over a voice channel between a transmitter of a base station and a receiver of a handset of a cordless telephone, including: (1) identifying a pause in voice traffic that is to be transmitted over the voice channel and (2) responding to the pause by causing the transmitter to transmit data to the receiver over the voice channel. (See page 12, lines 17-22, page 17, lines 1-6 and 11-13 and Figure 3.)

In one embodiment illustrated in Figure 3, the transmitter receives information from phone lines in a step 310. The received information is monitored as to whether it is voice or data in a step 315. Data information is buffered and a pause in voice traffic is also identified in the step 315. (See page 13, lines 3-9 and Figure 3.)

In a first decision point denoted "Silence Frames ?" in a step 320, the decision is made as to whether there is a pause in the voice information indicating a silence frame. If the decision is YES and a pause in voice information has been identified, the data information is injected into an interstice in the voice information in a step 325. Then, in a step 330, the data information is transmitted to the receiver for display. (See page 13, line 10 to page 14, line 3 and Figure 3.)

Independent Claim 15 is directed to a cordless telephone, including: (1) a base station transceiver, (2) a handset transceiver, wherein the base station and handset transceivers are cooperable to establish a voice channel therebetween, (3) a silence detector, coupled to the base

station transceiver, that identifies a pause in voice traffic that is to be transmitted over the voice channel and generates an interjection signal during the pause and (4) a data injector, coupled to the silence detector, that receives the interjection signal and responds by causing the base station transceiver to transmit data to the receiver over the voice channel. (See page 19 lines 1-12 and Figures 1-2.)

In one embodiment illustrated in Figure 1, a cordless telephone 100 includes a base station transceiver 110 and a handset transceiver 120. The base station transceiver 110 is connected to a telephone line 115 and includes a base station antenna 111 and a handset cradle 112. (See page 8 lines 1-21 and Figure 1.) The cordless telephone 100 of Figure 1 identifies a pause in voice traffic that is to be transmitted over a voice channel and generates an interjection signal during the pause. The injection signal then causes the transmitter to transmit data to the receiver over the voice channel. (See page 9 lines 1-8 and Figure 1.)

Regarding the dependent claims, the voice traffic may be analog voice traffic. (See page 4, line 21 to page 5, line 5; page 9, lines 8-12; and page 12, line 21 to page 13, line 2.) Additionally, the data may be caller identification data or menu item selection data. (See page 5, lines 12-23; page 9, line 18 to page 10, line 8; and page 11, line 18 to page 12, line 2.) The transmitter may also transmit the voice traffic in frames. (See page 6, lines 1-6; page 12, lines 3-6; and page 13, lines 10-12). Furthermore, a may pause in voice traffic may be identified by comparing a peak energy of the voice traffic to a noise floor reference. (See page 6, lines 7-9 and page 12, lines 10-14.)

Regarding dependent Claims 21-22, the voice traffic and the data may be received from a telephone line coupled thereto. The base station transceiver 110 is connected to a telephone line 115. (See page 8, lines 4-8 and Figure 1.) The data transmitter system 210 includes a base

station antenna 211, a transmitter/receiver 212, a telephone line interface 213, a silence detector 214, a data register 215 and a data injector 216. Voice and data information are accepted from the phone lines by the interface 213. (See page 10, lines 18-22 and Figure 2.)

#### VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The first issue presented for consideration in this appeal is whether Claims 1-2, 6, 8-9, 13, 15-16, 19 and 21-22, as rejected by the Examiner, are anticipated in accordance with 35 U.S.C. §102(e) by U.S. Patent No. 6,259,710 to Junghans (“Junghans”). The second issue presented for consideration in this appeal is whether Claims 4-5, 11-12 and 17-18, as rejected by the Examiner, are patentably nonobvious in accordance with 35 U.S.C. §103(a) over Junghans in view of U.S. Patent No. 6,349,212 to Martensson, *et al.*, (“Martensson”). The third issue presented for consideration in this appeal is whether Claims 7, 14 and 20 as rejected by the Examiner, are patentably nonobvious in accordance with 35 U.S.C. §103(a) over Junghans in view of U.S. Patent No. 6,301,287 to Walley, *et al.*, (“Walley”).

#### VII. APPELLANTS’ ARGUMENT

The inventions set forth in independent Claims 1, 8 and 15 and the respective dependent claims are neither anticipated by nor obvious over the references on which the Examiner relies.

##### Rejection under 35 U.S.C. 102(e) over Junghans

###### A. Rejection of Claims 1, 8 and 15

The Examiner has rejected Claims 1, 8 and 15 under 35 U.S.C. §102(e) as being anticipated by Junghans. The Appellants respectfully disagree since Junghans does not teach

communicating data over a voice channel between a transmitter of a base station and a receiver of a handset of a cordless telephone including identifying a pause in voice traffic that is to be transmitted over the voice channel and responding to the pause by causing the transmitter to transmit the data to the receiver over the voice channel as recited in Claims 1, 8 and 15.

Junghans is directed to a digital enhanced cordless telecommunications (DECT) system including a base station (transmitter) and a receiver (cordless handset). (See column 1, lines 7-10 and Figure 2.) The DECT system has two communication channels that are used for control data (C-plane) and for user data (U-plane), respectively. (See column 1, lines 23-34.) Junghans teaches a silence detector circuit 306 that determines periods of silence within voice data 302 transmitted through the U-plane. By determining the periods of silence, Junghans is able to direct the control data through the U-plane during the silence periods. (See column 5, lines 27-33.)

Junghans does not teach, however, responding to the silence periods by causing the base station (transmitter) to transmit data to the cordless handset (receiver) over the U-plane. On the contrary, Junghans teaches detecting silence in voice data that is being transmitted from the cordless handset (receiver) to the base station (transmitter). This is evident since the silence detector circuit is located in the cordless handset and since the periods of silence are when a user of the cordless handset is not speaking. (See column 1, lines 29-34; column 4, lines 46-54; and column 5, lines 23-27 and lines 53-55.) Accordingly, Junghans does not teach responding to the pause by causing the transmitter to transmit the data to the receiver over the voice channel as recited in Claims 1, 8 and 15.

The Examiner asserts that Junghans discloses the silence detector may also be in the base station. (See page 2 of the Advisory Action referring to column 6, lines 39-46 of Junghans.) The

Appellants respectfully disagree, however, since this section of Junghans teaches that the circuit of Figure 3, which includes the silence detector, can be implemented in a DECT system that is connected to an integrated services digital network (IDSN). Thus, Junghans discloses that the circuit 300 can be implemented in a DECT system that is connected to an ISDN but does not teach that the circuit 300 is implemented in the base station of a DECT system. Instead, Junghans states that the “peripheral circuitry of the present invention is implemented within the internal circuitry of the cordless telephone handset.” (See column 4, lines 50-52 and Figure 2.)

Accordingly, Junghans fails to teach all of the elements of independent Claims 1, 8 and 15, and, therefore, does not anticipate Claims 1, 8 and 15. Thus, the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner’s Final Rejection of Claims 1, 8 and 15.

#### B. Rejection of Claims 2, 9 and 16

The Examiner has rejected Claims 2, 9 and 16 under 35 U.S.C. §102(e) as being anticipated by Junghans. The above argument establishing that Junghans does not anticipate the inventions of independent Claims 1, 8 and 15 is incorporated herein by reference. Dependent Claims 2, 9 and 16 additionally require that the voice traffic is analog voice traffic, and thereby introduce a patentably distinct element in addition to the elements recited in Claims 1, 8 and 15, respectively. Junghans, however, does not teach that the voice traffic is analog voice traffic in combination with the base claim limitations. Thus, Junghans does not anticipate dependent Claims 2, 9 and 16. Accordingly, the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner’s Final Rejection of Claims 2, 9 and 16.

C. Rejection of Claims 6, 13 and 19

The Examiner has rejected Claims 6, 13 and 19 under 35 U.S.C. §102(e) as being anticipated by Junghans. The above argument establishing that Junghans does not anticipate the inventions of independent Claims 1, 8 and 15 is incorporated herein by reference. Dependent Claims 6, 13 and 19 additionally require that the voice traffic is transmitted in frames, and thereby introduce a patentably distinct element in addition to the elements recited in Claims 1, 8 and 15, respectively. Junghans, however, does not teach that the voice traffic is transmitted in frames in combination with the base claim limitations. Thus, Junghans does not anticipate dependent Claims 6, 13 and 19. Accordingly, the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of Claims 6, 13 and 19.

D. Rejection of Claim 21

The Examiner has rejected Claim 21 under 35 U.S.C. §102(e) as being anticipated by Junghans. The above argument establishing that Junghans does not anticipate the inventions of independent Claim 1 is incorporated herein by reference. Dependent Claim 21 additionally requires that the voice traffic and the data are received from a coupled telephone line, and thereby introduces a patentably distinct element in addition to the elements recited in Claim 1.

The Appellants do not find where Junghans teaches the control data that is transmitted during periods of silence has been received via a telephone line. On the contrary, the transmitted control data is data utilized between the base station and receiver within the DECT system. (See column 1, lines 28-30 and column 3, lines 7-12.) Thus, Junghans teaches the control data is from the DECT system and not received via a telephone line. Therefore, in addition to not teaching

each element of independent Claim 1, Junghans also does not teach that the voice traffic and the data are received from a coupled telephone line as recited in Claim 21.

The Examiner asserts that Junghans does teach a system that receives voice traffic and data from a telephone line. (See Examiner's Final Rejection, page 3 referring to column 4, lines 45-65 of Junghans.) The data that the Examiner refers to in column 4 of Junghans, however, is not the control data that is transmitted during periods of silence but is data that includes voice data or digital data. Instead of being inserted, this voice or digital data is examined to determine periods of silence for inserting the control data. (See column 6, lines 31-33.) Junghans, therefore, does not teach transmitting data during periods of silence wherein the data transmitted during the period of silence has been received over a telephone line. More specifically, Junghans does not teach a transmitter that transmits data received over a telephone line to a receiver in response to an interjecting signal generated in response to an identified pause in voice traffic as recited in dependent Claim 21.

Accordingly, Junghans does not anticipate dependent Claim 21 and the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of Claim 21.

#### E. Rejection of Claim 22

The Examiner has rejected Claim 22 under 35 U.S.C. §102(e) as being anticipated by Junghans. The above argument establishing that Junghans does not anticipate the inventions of independent Claim 8 is incorporated herein by reference. Dependent Claim 22 additionally requires that the voice traffic and the data are received from a telephone line coupled to the base

station, and thereby introduces a patentably distinct element in addition to the elements recited in Claim 8.

In addition to the elements of Claim 8, the Appellants do not find where Junghans teaches the control data that is transmitted during periods of silence has been received via a telephone line coupled to the base station. On the contrary, as discussed above with respect to Claim 21, the transmitted control data is data utilized between the base station and receiver within the DECT system. (*See* column 1, lines 28-30 and column 3, lines 7-12.) Thus, in addition to not teaching each element of independent Claim 8, Junghans also does not teach that the voice traffic and the data are received from a telephone line coupled to the base station as recited in Claim 22.

As argued previously, the Examiner asserts that Junghans does teach a system that receives voice traffic and data from a telephone line. (*See* Examiner's Final Rejection, page 3 referring to column 4, lines 45-65 of Junghans.) The data that the Examiner refers to in column 4 of Junghans, however, is not the control data that is transmitted during periods of silence but is data that includes voice data or digital data. Instead of being inserted, this voice or digital data is examined to determine periods of silence for inserting the control data. (*See* column 6, lines 31-33.) Thus, the data that is received via a telephone line in Junghans is not the data (control data) that is inserted in periods of silence. Junghans, therefore, does not teach transmitting data during periods of silence wherein the data transmitted during the period of silence has been received over a telephone line. More specifically, Junghans does not teach transmitting data, received over a telephone line coupled to a base station, to a receiver in response to an interjecting signal generated in response to a pause identified in voice traffic as recited in dependent Claim 22.

Accordingly, Junghans does not anticipate dependent Claim 22 and the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of Claim 22.

Rejection under 35 U.S.C. 103(a) over Junghans in view of Martensson

A. Rejection of Claims 4, 11 and 17

The Examiner has rejected Claims 4, 11 and 17 under 35 U.S.C. §103(a) as being unpatentable over Junghans in view of Martensson. The above argument establishing that Junghans does not teach each element of the inventions of independent Claims 1, 8 and 15 is incorporated herein by reference. Junghans also fails to suggest each element of independent Claims 1, 8 and 15 since Junghans teaches detecting periods of silence within voice data being transmitted from a cordless handset to a base station and does not teach responding to a pause in voice traffic by causing the transmitter of a base station to transmit data to the receiver of a handset as recited in Claims 1, 8 and 15. (*See column 5, line 65 to column 6, line 24.*) On the contrary, Junghans specifically teaches that the silence detecting circuitry is implemented within the internal circuitry of the cordless telephone, not a base station. (*See column 4, lines 50-52.*) Junghans, therefore, neither teaches nor suggests each element of independent Claims 1, 8 and 15.

Dependent Claims 4, 11 and 17 additionally require that the data comprises caller identification data, and thereby introduce a patentably distinct element in addition to the elements recited in Claims 1, 8 and 15, respectively. As recognized by the Examiner, Junghans does not teach or suggest that the data comprises caller identification data. To teach the data is caller identification data, the Examiner cites Martensson. Martensson, however, has not been

cited to cure the other deficiencies of Junghans discussed above with respect to independent Claims 1, 8 and 15. (See Examiner's Final Rejection, page 4.) Additionally, the Appellants do not find where Martensson teaches identifying a pause in voice traffic that is to be transmitted over the voice channel and responding to the pause by causing the transmitter to transmit the data to the receiver over the voice channel as recited in Claims 1, 8 and 15. On the contrary, Martensson is directed to a cordless telephone arrangement including a base station and a plurality of mobile stations wherein the base station is adapted to automatically dial a telephone number in response to instructions from the mobile stations. (See column 2, lines 24-34.)

Thus, the cited combination of Junghans and Martensson does not teach or suggest all of the elements of the inventions of independent Claims 1, 8 and 15 and thus, does not establish a *prima facie* case of obviousness of dependent Claims 4, 11 and 17, which include the elements of the respective independent claims. Accordingly, Claims 4, 11 and 17 are nonobvious over Junghans in view of Martensson and the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of Claims 4, 11 and 17.

#### B. Rejection of Claims 5, 12 and 18

The Examiner has rejected Claims 5, 12 and 18 under 35 U.S.C. §103(a) as being unpatentable over Junghans in view of Martensson. The above argument establishing that Junghans does not teach or suggest each element of the inventions of independent Claims 1, 8 and 15 is incorporated herein by reference. Dependent Claims 5, 12 and 18 additionally require that the data comprises menu item selection data, and thereby introduce a patentably distinct element in addition to the elements recited in Claims 1, 8 and 15, respectively. As recognized by the Examiner, Junghans does not teach or suggest that the data comprises menu item selection

data. To teach data that comprises menu item selection data, the Examiner cites Martensson. Martensson, however, has not been cited to cure the other deficiencies of Junghans discussed above with respect to independent Claims 1, 8 and 15. (See Examiner's Final Rejection, page 4.) Additionally, the Appellants do not find where Martensson teaches identifying a pause in voice traffic that is to be transmitted over the voice channel and responding to the pause by causing the transmitter to transmit the data to the receiver over the voice channel as recited in Claims 1, 8 and 15. On the contrary, Martensson is directed to a cordless telephone arrangement including a base station and a plurality of mobile stations wherein the base station is adapted to automatically dial a telephone number in response to instructions from the mobile stations. (See column 2, lines 24-34.)

Thus, the cited combination of Junghans and Martensson does not teach or suggest all of the elements of the inventions of independent Claims 1, 8 and 15 and thus, does not establish a *prima facie* case of obviousness of dependent Claims 5, 12 and 18, which include the elements of the respective independent claims. Accordingly, Claims 5, 12 and 18 are nonobvious over Junghans in view of Martensson and the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of Claims 5, 12 and 18.

Rejection under 35 U.S.C. 103(a) over Junghans in view of Walley

A. Rejection of Claims 7, 14 and 20

The Examiner has rejected Claims 7, 14 and 20 under 35 U.S.C. §103(e) as being unpatentable over Junghans in view of Walley. The above argument establishing that Junghans does not teach or suggest each element of the inventions of independent Claims 1, 8 and 15 is incorporated herein by reference. Dependent Claims 7, 14 and 20 additionally require

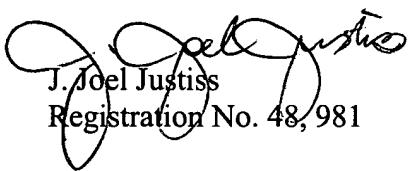
identifying a pause in voice traffic by comparing a peak energy of the voice traffic to a noise floor reference, and thereby introduce a patentably distinct element in addition to the elements recited in Claims 1, 8 and 15, respectively. As recognized by the Examiner, Junghans does not teach or suggest identifying a pause in voice traffic by comparing a peak energy of the voice traffic to a noise floor reference. Accordingly, the Examiner cites Walley. Walley, however, has not been cited to cure the other deficiencies of Junghans discussed above with respect to independent Claims 1, 8 and 15. (See Examiner's Final Rejection, pages 4-5.) Additionally, the Appellants do not find where Walley teaches identifying a pause in voice traffic that is to be transmitted over the voice channel and responding to the pause by causing the transmitter to transmit the data to the receiver over the voice channel as recited in Claims 1, 8 and 15. On the contrary, Walley is directed to generating a signal quality value using a simple, robust method. (See column 2, lines 20-23.)

Thus, the cited combination of Junghans and Walley does not teach or suggest all of the elements of the inventions of independent Claims 1, 8 and 15 and thus, does not establish a *prima facie* case of obviousness of dependent Claims 7, 14 and 20, which include the elements of the respective independent claims. Accordingly, Claims 7, 14 and 20 are nonobvious over Junghans in view of Walley and the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of Claims 7, 14 and 20.

For the reasons set forth above, the Claims on appeal are not anticipated by Junghans. Further, the Claims are patentably nonobvious over Junghans in view of either Martensson or Walley. Accordingly, the Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the Examiner's Final Rejection of all of the Appellant's pending claims.

Respectfully submitted,

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## VIII. APPENDIX A - CLAIMS

1. For use in communicating data over a voice channel between a transmitter of a base station and a receiver of a handset of a cordless telephone, a system comprising:
  - a silence detector, coupled to said transmitter, that identifies a pause in voice traffic that is to be transmitted over said voice channel and generates an interjection signal during said pause; and
  - a data injector, coupled to said silence detector, that receives said interjection signal and responds by causing said transmitter to transmit data to said receiver over said voice channel.
2. The system as recited in Claim 1 wherein said voice traffic is analog voice traffic.
3. (canceled)
4. The system as recited in Claim 1 wherein said data comprises caller identification data.
5. The system as recited in Claim 1 wherein said data comprises menu item selection data.
6. The system as recited in Claim 1 wherein said transmitter transmits said voice traffic in frames.
7. The system as recited in Claim 1 wherein said silence detector identifies said pause by comparing a peak energy of said voice traffic to a noise floor reference.
8. A method of communicating data over a voice channel between a transmitter of a base station and a receiver of a handset of a cordless telephone, comprising:
  - identifying a pause in voice traffic that is to be transmitted over said voice channel; and
  - responding to said pause by causing said transmitter to transmit data to said receiver over said voice channel.
9. The method as recited in Claim 8 wherein said voice traffic is analog voice traffic.
10. (canceled)

11. The method as recited in Claim 8 wherein said data comprises caller identification data.
12. The method as recited in Claim 8 wherein said data comprises menu item selection data.
13. The method as recited in Claim 8 wherein said transmitter transmits said voice traffic in frames.
14. The method as recited in Claim 8 wherein said identifying comprises comparing a peak energy of said voice traffic to a noise floor reference.
15. A cordless telephone, comprising:
  - a base station transceiver;
  - a handset transceiver, said base station and handset transceivers cooperable to establish a voice channel therebetween;
  - a silence detector, coupled to said base station transceiver, that identifies a pause in voice traffic that is to be transmitted over said voice channel and generates an interjection signal during said pause; and
  - a data injector, coupled to said silence detector, that receives said interjection signal and responds by causing said base station transceiver to transmit data to said receiver over said voice channel.
16. The cordless telephone as recited in Claim 15 wherein said voice traffic is analog voice traffic.
17. The cordless telephone as recited in Claim 15 wherein said data comprises caller identification data.
18. The cordless telephone as recited in Claim 15 wherein said data comprises menu item selection data.
19. The cordless telephone as recited in Claim 15 wherein said base station transceiver transmits

said voice traffic in frames.

20. The cordless telephone as recited in Claim 15 wherein said silence detector identifies said pause by comparing a peak energy of said voice traffic to a noise floor reference.

21. The system as recited in Claim 1 wherein said system receives said voice traffic and said data from a telephone line coupled thereto.

22. The method as recited in Claim 8 further comprising receiving said voice traffic and said data from a telephone line coupled to said base station.

## IX. APPENDIX B - EVIDENCE

The evidence in this appendix includes U.S. Patents to Junghans, Martensson and Walley. Junghans was entered in the record by the Examiner with the sixth Examiner's Office Action. Martensson and Walley were entered in to the record by the Examiner with the fifth Examiner's Office Action.